

## BRIEFER ARTICLES.

*Olpitrichum*, a new genus of mucedinous fungi.—WITH PLATE XXIII.  
—Among the fungi which are active in hastening the rot of the carpellary tissues of the fruit of *Gossypium* in the United States, when the cotton is mature and during wet weather, are several mucedinous fungi which are attractive from the whitish or dirty buff color of the loose mass of threads and spores. Two of these which are quite common are members of the genus *Rhinotrichum* Corda. They occur either separate or intermingled on the same boll. *R. macrosporum* Farlow is, perhaps, the more common of the two and is quite frequently of a sordid buff color and can thus be provisionally separated from the other species, *R. tenellum* B. & C., at times, before examination with the microscope. These two species are quite common in the vicinity of Auburn, Alabama, and I have found them in several other parts of the state.

When visiting Brundage, Ala., for the purpose of inspecting the condition of the cotton in that region, I collected a fungus on the bolls which I took upon superficial examination to be *R. tenellum*, from the fact that it resembled this species in color. It proved to be very different however, and the character of the basidia clearly separates it from the genus *Rhinotrichum*.

In *Rhinotrichum*<sup>1</sup> the sterile hyphæ are creeping, the fertile ones erect, their ends being denticulate to spiculigerous, the spores being borne on these acicular sterigmata. In this new genus, for which I propose the name *Olpitrichum*, instead of the ends of the fertile hyphæ being denticulate or spiculigerous, they bear well developed flask-shaped basidia, which are scattered over the surface of the terminal portion of the hypha, or are clustered irregularly or in rosettes. The genus may be characterized as follows:

*Olpitrichum* gen. nov.—Saprogenous. Sterile hyphæ creeping, septate, branched; fertile hyphæ erect, simple or little branched, septate. Near the apex provided with flask-shaped, fusoid, or enlarged basidia, irregularly scattered or gregarious, which may be branched or become proliferous, each bearing a single spore. Conidia ovoid-oblong, hyaline or pale colored. It is *Rhinotrichum* but with inflated basidia which are constricted at the point of union with the hypha. It bears much the same relation to *Rhinotrichum* that *Pachybasium*<sup>2</sup> does to *Verticil-*

<sup>1</sup>Corda, Icones Fung. 1: 17. Saccardo, Syll. Fung. 4: 91.

<sup>2</sup>Saccardo, Fung. Alger. Tahit. Gall. 6.—Syllog. Fung. 4: 149.

*lium*. The basidia resemble somewhat those of *Cylindrodendrum*,<sup>3</sup> are less regular in form, while those of *Cylindrodendrum* are subopposite and sometimes whorled, and the conidia are strictly cylindrical.

*Olpitrichum carpophilum* sp. nov.<sup>4</sup>—Effuse, whitish. Fertile hyphæ hyaline, 3-7-septate,  $90-180 \times 4-6\mu$ . Basidia flask-shaped or fusoid scattered, or grouped irregularly or in the form of rosettes,  $10-15 \times 3-6\mu$ . Conidia ovate or sometimes oblong or broadly elliptical, frequently with a minute apiculus at the base, hyaline,  $25-30 \times 16-25\mu$ , or  $16-25\mu$  in diameter. On decaying carpels of *Gossypium herbaceum*, Brundage, Ala., Sept. 1891.

The characters of *O. carpophilum* are shown in plate XXIII, figures 1 to 4. *Rhinotrichum macrosporum* Farlow and *R. tenellum* B. & C. are also represented in the same plate. The spores of *R. macrosporum* Farl. measure  $15-30 \times 10-20\mu$ , and those of *R. tenellum* B. & C. measure  $6-12 \times 10-20\mu$ . The ends of the fruiting hyphæ or their branches are somewhat enlarged and denticulate or spiculigerous in *R. tenellum*.

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EXPLANATION OF PLATE XXIII.—Figs. 1-4, *Olpitrichum carpophilum* Atkinson.—Figs. 5-8, *Rhinotrichum macrosporum* Farlow. Figs. 9-13, *R. tenellum*, B. & C. Figs. 4-7, 9-13 drawn to the same scale; 1-3, 8, and 14 drawn to the same and a higher scale.

Notes on germinating myxomycetous spores.—The paper upon the germination of spores of *Enteridium Rozeanum*, by E. J. Durand, in the March number of the GAZETTE, suggested to me that possibly my own experience was worthy of record.

In the early part of April, 1893, I brought in a specimen of *Reticularia umbrina* Fries. As soon as it was mature, five days later, spores were placed in ordinary drinking water, and in a few hours were found to have germinated. Further experiments showed that some spores germinated within from fifty-five to sixty minutes. Within ninety minutes one-tenth of the spores usually germinated, and few germinated later. The swarm cells remained active several days in the moist chamber. During the past year the spores of this and other specimens of *Reticularia umbrina* have been frequently germinated in my laboratory by different students, no difficulty ever having been experienced. By placing a quantity of the spores in some distilled water in a watch glass, millions of the swarm-cells will appear in an hour or two and form a conspicuous white layer, with the ruptured episporous and ungerminated spores as a substratum.

<sup>3</sup>Bonorden, Handbook.—Cornu, *Reproduction des Ascomycetes, etc.*, Ann. d. Sci. Nat. Bot. VI. 3: 53. pl. 9. fig. 12.

<sup>4</sup>This fungus appeared in the exhibit of the Agr. Dept. at the World's Fair, Chicago, 1893, among the diseases of cotton from Alabama, under the provisional name *Rhinotrichum macrosterigmatum* Atkinson, which name was never published.